

REMARKS/ARGUMENTS

Reconsideration of this application in response to the Office Action of May 2, 2006 wherein Claims 1-18 have been rejected is requested. Claims 1-18 remain pending in the application. No amendments have been made.

Throughout the office action, the wrong patent number is cited for one of the Daniels et al. references; US 6,316,978 should be US 6,319,978. The responses and the declaration refer to US 6,319,978.

Rejection of Claims 1-4, 6-11 and 13 under 35 USC 102(b) as being Anticipated by Daniels et al. (US 5,872,181)

Beginning at page 2 of the Office Action, Claims 1-4, 6-11 and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by Daniels et al. '181. The Examiner in paragraphs 2-4 maintained the rejection set forth in prior Office Actions noting that Figure 1 clearly teaches materials having a tensile storage modulus within Applicants' claimed range and Example 6 showed the synthesis of a vinyl acetate/ethylene polymer incorporating acrylic acid. Polyvinyl alcohol was used as the protective colloid. In addition, the Examiner noted the commercial Airflex® polymers exhibited the claimed storage modulus.

With regard to the claimed "crystalline melting point," the Examiner posited that the property would be inherent to the materials of the prior art, because of the broad melting point range in claims 1-18 and because the Examiner believed the types of comonomers used and the amounts of them along with the polymerization conditions follow closely to the process used by applicants.

Rejection of Claims 1-18 under 35 USC 103(a) as being Unpatentable over Daniels et al. (US 5,872,181)

At page 4, paragraphs 6-10, of the Office Action, the Examiner rejected Claims 1-18, based on US 5,872,181, on similar grounds to those set forth in prior Office Actions.

Rejection of Claims 1-18 under 35 USC 103(a) as being Unpatentable over Daniels et al. (US 6,316,978)

At page 4, paragraphs 11-16, of the Office Action, the Examiner rejected Claims 1-18, based on US 6,316,978, on similar grounds to those set forth in prior Office Actions. The rejection also included Daniels et al. '181.

Rejection of Claims 1-18 under 35 USC 103(a) as being Unpatentable over Daniels et al. (US 5,872,181 or 6,316,978) in View of Worrall (US 3,355,322)

At paragraphs 15 and 16 of the Office Action, Worrall was cited as teaching copolymers used to coat cellulose where the polymers contain 10-70% ethylene and 80-30% vinyl acetate. It was argued that it would have been obvious to combine the teachings to have 50-70% ethylene and the corresponding amounts of other monomers in the materials taught by Daniels et al. for coating paper substrates.

Examiner's Response to Applicants Prior Arguments.

Starting at page 6 of the Office Action, the Examiner responded to Applicants' prior arguments and declaration. It was the Examiner's view that the prior art showed materials having a storage modulus within the claimed range and reasons were provided as to why it was believed the polymers also would have the same claimed melting point.

The key point of the Examiner's response relates to the Daniel's declaration of February 14, 2006. Mr. Daniel's declaration (sections 9 and 10) state, inter alia, that none of the "claimed" vinyl acetate/ethylene polymers were observed as having ethylene crystallinity within the range of 35 to 110 °C. The Examiner deemed the language limiting, indicating that the comparison should have been made with respect to the working examples and comparative examples where such vinyl acetate/ethylene polymers had a tensile storage modulus within the claimed range. To satisfy the Examiner, it would be necessary to compare the claimed polymers to polymer examples having the claimed modulus and then show that they did not have the same melting points (Office Action, page 8).

Response to Examiner's Comments.

As a first point, Applicants believe the Examiner has interpreted the Daniel's declaration, section 9, too narrowly. Applicants appreciate the fact that the phrase "claimed polymers" might have been narrower than the actual working embodiments; but, that was not the case. The working embodiments are within the claims of '181.

As a second point, the commercial polymers, i.e., AIRFLEX®-400, 401, 426, 465 and 7200 polymer emulsions and a few of the polymers in the working examples of '181, had a storage modulus of greater than 1×10^5 ; but sections 10 and 11 of the declaration state that none had crystalline melting points of 35 to 110 °C and section 12 notes that the thermal properties of the vinyl acetate/ethylene polymers in '181 were substantially different from the

claimed polymers having ethylene crystallinity and a thermal melting point of from 35 to 110 °C.

To facilitate the prosecution, a new declaration has been provided by Mr. Daniels with this response, in order to clarify the perceived ambiguity in the declaration of February 14, 2006. The new declaration refers to all vinyl acetate/ethylene polymers disclosed in '181, including the working examples and all commercial vinyl acetate/ethylene polymers, and points out that none of the polymers exhibited ethylene crystallinity having a thermal melting point of from 35 to 110 °C, even though some of the commercial vinyl acetate/ethylene polymers do have a storage modulus that is greater than 1×10^5 at 115 °C.

The revised and newly submitted declaration also refers to US 6,319,978 which discloses pressure sensitive adhesives based upon vinyl acetate/ethylene polymers. All polymers including working examples and comparative examples disclosed therein, did not exhibit ethylene crystallinity shown by a melting point within a range of 35 to 110 °C, even though some may have had a storage modulus within the claimed range.


With regard to properties of the polymers of the prior art vis-à-vis the instantly claimed polymers, it is respectfully submitted that it does not follow that because the polymers have one identical property, i.e., storage modulus; they must have the other properties, i.e., ethylene crystallinity and a melting point temperature of from 35 to 110 °C. It was previously pointed out that the polymers in '978 are "pressure sensitive." Some have a high storage modulus. However if a pressure sensitive adhesive is applied to a paper roll and the roll wound upon itself, it blocks. That is the nature of pressure sensitive adhesives. On the other hand the polymers of the instantly claimed invention result in essentially non blocking rolls as shown in the table. Thus, polymers of the cited reference and the claimed polymer have a common property but dissimilar adhesive properties. Applicants believe these property differences are accounted for in the claimed parameters of the polymers, i.e., the tensile strength modulus plus ethylene crystallinity as shown by a melting point of from 35 to 110 °C.

Lastly, it would appear to Applicants that the Examiner's case for the rejection of Claims 1-18 rests solely on 35 U.S.C. §102(b). The Examiner has taken the position that the polymers in the prior art having the claimed storage modulus would also have the claimed ethylene crystallinity. However, none of the polymers recited in the prior art have ethylene crystallinity as exhibited by a thermal melting point of 35 to 110 °C. In view of the fact that none of the polymers of the cited prior art have ethylene crystallinity, there is no case for a rejection of the claims based upon obviousness under 35 U.S.C. §103(a) because there is no

teaching or motivation that would have led one skilled in the art to develop polymers having the claimed melting point range.

In summary, the arguments set forth by Applicants in prior responses apply here in terms of a rejection under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) over Daniels et al. '181 and Daniels et al. '978, or Daniels et al ('181 and '978) combined with Worrall. With the revised declaration clarifying what the Examiner believed was a defect in the prior declaration, the statutory basis for any rejection of Claims 1-18 has been rebutted. Applicants have demonstrated that polymers are different in terms of properties and the differences are unexpected. Therefore, it is requested that all rejections be withdrawn and the case passed to issue.

Respectfully submitted,

A handwritten signature in cursive script that reads "Mary E. Bongiorno".

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